ABSTRACT

The present invention provides methods and apparatus for statistical multiplexing of a large number of data streams. A plurality of encoders are associated with each first stage multiplexer. Bandwidth allocation among all encoders is controlled by a second stage

5   multiplexer. A bandwidth request message is communicated from each the encoders to the second stage multiplexer. The second stage multiplexer allocates available bandwidth based on the bandwidth request messages. The second stage multiplexer then communicates an allocated bandwidth message to each encoder. Each encoder encodes a data stream in accordance with its allocated bandwidth to provide an encoded data stream. A plurality of the

10   encoded data streams are multiplexed at each first stage multiplexer to provide a multiplexed data stream at a constant data rate. The second stage multiplexer mutiplexes the multiplexed data streams from the first stage multiplexers to provide a multiplexed transport stream.

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